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Climate scientists' warning on air quality

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Actions to improve air quality and reduce climate change need to be linked claim scientists attending an annual United Nations conference on climate change in Poland this week.

By the 2090s close to one-fifth of the world's population will be exposed to ozone levels well above the World Health Organization recommended safe-health level. Met Office Hadley Centre models project year-round increases in ozone will be large, representing more than a threefold increase in the percentage of population affected.

Scientists claim that many greenhouse gases and aerosols linked to climate change are also linked to air quality and human health. For example, ozone contributes to global warming and is also a powerful respiratory irritant in levels frequently observed in urban areas.

New scientific evidence shows much stronger interactions between the carbon cycle, low-level ozone and atmospheric aerosols than previously thought, strengthening evidence for linking action to curb different types of pollution.

Vicky Pope, head of climate change advice at the Met Office, commented: "This complex cycle means that increased carbon dioxide reduces the removal of ozone by plants during the growing season, resulting in higher atmospheric ozone concentrations. High levels of ozone poison plants and reduce the rate of photosynthesis which, in turn, reduces the absorption of CO2 by plants, leading to increased global warming."

Jim Haywood explains climate change and aerosols